RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _____ 10/553,928 _____

Source: _____ PCT _____

Date Processed by STIC: _____ 11/03/2005 _____

ENTERED

PCT

RAW SEQUENCE LISTING　　　　　　　　　DATE: 11/03/2005
PATENT APPLICATION:　US/10/553,928　　TIME: 08:27:22

Input Set : D:\SONN079US.APP.txt
Output Set: N:\CRF4\11032005\J553928.raw

Cpg-6)

```
 3 <110> APPLICANT: MEINKE, ANDREAS
 4        MIN BUI, DUC
 5        NAGY, ESZTER
 6        HENICS, TAMAS
 8 <120> TITLE OF INVENTION: H. PYLORI ANTIGENS
10 <130> FILE REFERENCE: SONN:079US
12 <140> CURRENT APPLICATION NUMBER: US/10/553,928
13 <141> CURRENT FILING DATE: 2005-10-20
15 <150> PRIOR APPLICATION NUMBER: PCT/EP2004/004255
16 <151> PRIOR FILING DATE: 2004-04-22
18 <150> PRIOR APPLICATION NUMBER: EP 03450097.5
19 <151> PRIOR FILING DATE: 2003-04-22
22 <160> NUMBER OF SEQ ID NOS: 358
24 <170> SOFTWARE: PatentIn Ver. 2.1
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 1902
28 <212> TYPE: DNA
29 <213> ORGANISM: Artificial Sequence
31 <220> FEATURE:
32 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
33        Primer
35 <400> SEQUENCE: 1
36 atggtgaaaa acaccggcga attgaaaaaa ctttcagaca cttatgagaa tttgagcaac 60
37 cttttaacca attttaacaa cctcaatcaa gcggtaacga acgcgagcag cccttcagaa 120
38 atcaatgcca cgatcgataa tttaaaagca aacacgcaag ggctgattgg cgaaaaaacc 180
39 aattccccgg cgtatcaagc ggtgtatttg gcgctcaatg cggcggtggg gctgtggaat 240
40 gtgatagcct ataatgtcca atgcggtcct ggtaagagtg gggatcaaag cgtaattttt 300
41 gatggccaac caggacatga ttcaagatcc attaattgca atttaaccgg ttataacaac 360
42 ggggttagcg gcccttttatc cattgacaat tttaaaacgc ttaatcaagc ttatcaaact 420
43 atccaacaag ctttaaaaca agatagcgga tttcctgttt tggatagtaa aggaaaacaa 480
44 gtaactataa aaataacaac acaaactaat ggagctaata aaagtgaaac tactactact 540
45 actactacta ctaatgacgc tcaaacccct ttgcaagaag ccagtaaaat gataagcgtc 600
46 ctcactacaa actgcccatg ggtaaatacc gctcataact caaacggggg tgcaccgtgg 660
47 aatttaaata cgacagggaa tgtgtgtcag gtttttgcca cggagtttag cgccgttact 720
48 agcatgatca aaaacgcgca agaaatcgta acgcaagctc aaagccttaa caacccgcaa 780
49 agcaatcaaa acgcgccgaa agatttcaat ccttacacct ctgctgatag ggctttcgct 840
50 caaaacatgc tcaatcacgc gcaagcgcaa gccaagatgc ttgaactagc cgatcaaatg 900
51 aaaaaagacc ttaacactat cccaaaacaa tttatcacaa actacttggc agcttgccgc 960
52 aatgggggtg ggacattacc tgatgcaggg gttacttcta cacttgggg ggccggttgc 1020
53 gcctatgtgg aagagacgat aaccgcccta aataacagcc ttgcgcattt tggcactcaa 1080
54 gccgatcaaa tcaagcaatc tgagttgttg gcgcgcacga tacttgattt tagaggcagc 1140
55 cttaaggatt taaacaacac ttataacagc atcaccacga ccgcttcaaa cacgcccaat 1200
56 tccccattcc ttaaaaattt gataagccaa tccactaacc ctaataaccc cgggggctta 1260
```

RAW SEQUENCE LISTING   DATE: 11/03/2005
PATENT APPLICATION: US/10/553,928   TIME: 08:27:22

Input Set : D:\SONN079US.APP.txt
Output Set: N:\CRF4\11032005\J553928.raw

```
57 caggccgttt atcaagtcaa ccaaagcgct tattcgcaat tattaagcgc cacgcaagaa 1320
58 ttagggcata acccttttcag acgcgttggc ttaatcagct ctcaaaccaa caacggtgcg 1380
59 atgaatggga tcggcgtgca aatagggtat aaacaatttt ttggtgaaaa aagaagatgg 1440
60 gggttaaggt attatggttt ttttgattac aaccatgctt atatcaaatc cagctttttc 1500
61 aactccgcct ctgatgtgtt cacttatggg gtaggaacag atgtcctcta taactttatc 1560
62 aacgataaag ccaccaaaaa caataagatt tcttttgggg tgtttggggg gattgcgtta 1620
63 gctggcactt cgtggcttaa ttctcaatac gtgaatttag cgacattcaa taattttac 1680
64 agcgctaaaa tgaatgtggc gaatttccaa ttcttattca acttgggctt gagaatgaat 1740
65 ctcgctaaaa acaaaaagaa agcgagcgat catgtagctc agcatggcgt ggaactaggc 1800
66 gtgaagatcc ctacgatcaa cacgaattac tattctttgc taggcactca actccaatac 1860
67 cgcaggcttt atagcgtgta tttgaattat gtgtttgctt ac                    1902
70 <210> SEQ ID NO: 2
71 <211> LENGTH: 1638
72 <212> TYPE: DNA
73 <213> ORGANISM: Artificial Sequence
75 <220> FEATURE:
76 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
77       Primer
79 <400> SEQUENCE: 2
80 atggcaaaag aaatcaaatt ttcagatagc gcgagaaacc ttttatttga aggcgtgaga 60
81 caactccatg acgctgttaa agtaaccatg gggccaagag gcaggaacgt gttgatccaa 120
82 aaaagctatg gcgctccaag catcactaaa gatggcgtga gcgtggctaa agagattgaa 180
83 ttaagttgcc cggtagctaa catgggcgct caactcgtta aagaagtagc gagcaaaacc 240
84 gctgatgctg ccggcgatgg cacgaccaca gcgaccgtgc tggcttatag cattttaa 300
85 gaaggtttga ggaacatcac ggctggggct aaccctattg aagtgaaacg aggcatggat 360
86 aaagccgctg aagccattat taatgagctt aaaaaagcga gcaaaaaagt gggcggtaaa 420
87 gaagaaatca cccaagtggc gaccatttct gcaaactccg atcacaatat cgggaaactc 480
88 atcgctgacg ctatggaaaa agtgggtaaa gacggcgtga tcaccgttga gaagctaag 540
89 ggcattgaag atgaactaga tgttgtagaa ggcatgcaat ttgatagagg ctacctctcc 600
90 ccttatttg taacaaacgc tgagaaaatg accgctcaat ggataacgc ttacatcctt 660
91 ttaacggata aaaaatctc tagcatgaaa gacattctcc cgctactaga aaaaccatg 720
92 aaagagggca aaccgctttt aatcatcgct gaagacattg agggcgaagc tttaacgact 780
93 ctagtggtga ataaattaag aggcgtgttg aatatcgcag cggttaaagc tccaggcttt 840
94 ggggacagaa gaaaagaaat gctcaaagac atcgctattt taaccggcgg tcaagttatt 900
95 agcgaagaat tgggcttgag tctagaaaac gctgaagtgg agttttttagg caaagccgga 960
96 aggattgtga ttgacaaaga caacaccacg atcgtagatg gcaaaggcca tagccatgat 1020
97 gtcaaagaca gagtcgcgca aatcaaaacc caaattgcaa gcacgacaag cgattatgac 1080
98 aaagaaaaat tgcaagaaag gttggctaaa ctctctggcg gtgtggctgt gattaaagtg 1140
99 ggcgctgcga gtgaagtgga aatgaaagag aaaaagacc gggttgatga tgcgttgagc 1200
100 gcgactaaag cggctgttga agaaggtatt gtgattggcg gcggtgcggc tctcattcgc 1260
101 gcggctcaaa aagtgcattt gaatttgcac gatgatgaaa aagtgggcta tgaaatcatc 1320
102 atgcgcgcca ttaaagcccc attagctcaa atcgctatca atgccggtta tgatggcggt 1380
103 gtggtcgtga atgaagtaga aaaacacgaa gggcattttg gttttaacgc tagcaatggc 1440
104 aagtatgtgg atatgtttaa agaaggcatt attgacccct aaaagtaga aaggatcgct 1500
105 ttacaaaatg cggtttcggt ttcaagcctg cttttaacca cagaagccac cgtgcatgaa 1560
106 atcaaagaag aaaaagcggc cccagcaatg cctgatatgg gtggcatggg cggtatggga 1620
107 ggcatgggtg gcatgatg                                               1638
110 <210> SEQ ID NO: 3
111 <211> LENGTH: 1410
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/553,928

DATE: 11/03/2005
TIME: 08:27:22

Input Set : D:\SONN079US.APP.txt
Output Set: N:\CRF4\11032005\J553928.raw

```
112 <212> TYPE: DNA
113 <213> ORGANISM: Artificial Sequence
115 <220> FEATURE:
116 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
117       Primer
119 <400> SEQUENCE: 3
120 atgaaaatta aaaatatctt actgagtggg gggagcggga aacgcctatg gcctttaagc 60
121 cgtagcctat accctaagca attttttaaag ctttttgacc ataaaagctt gtttgaattg 120
122 agttttaaaa gaaacgcttc cttagtagat gaaacgctca ttgtgtgcaa tgaaaagcat 180
123 tattttttag ccctagaaga gataaagaat gaaatcaaaa acaaaagcgt gggttttttta 240
124 ttagagagct tgagtaaaaa caccgctaac gccatcgctt tgagcgcttt aatgagcgat 300
125 aaagaagatt tgctcatcgt tacgccaagc gatcatttga ttaaagacct tcaagcgtat 360
126 gaaaacgcga taaaaaaagc gattgatcta gcccaaaaag gttttttagt cacttttggg 420
127 gtgagtattg acaagcccaa cacggagttt gggtatattg aaagccctaa tggtttagat 480
128 gtcaagcgat tcattgaaaa gccaagccta gacaaagcga tagagtttca aaaaagcggg 540
129 ggtttttatt tcaatagcgg catgtttgtt ttccaagcgg gcgttttttt agacgaacta 600
130 aaaaagcatg cccccactat tttaaagggg tgtgaaagag cgtttgaatc tttagaaaac 660
131 gcgtattttt ttgaaaaaaa gatcgctcgt ttgagcgaaa agagcatgca agatttagaa 720
132 gacatgagta ttgatatagc cttaatgcaa caaagccaca aaatcaaaat ggtagaattg 780
133 aacgccaaat ggagcgattt agggaatttt aacgctcttt ttgaagaagc ggctaacgag 840
134 cctaaagaaa atgtcagctt gaatcaaacg cctgtttttg ccaaagaaag cgaaaataat 900
135 ttagtgtttt ctcataaagt gagcgctctt ttaggcgttg agaatttagc ggttattgac 960
136 actaaagacg ctctttttaat cgctcataaa gacaaggcta aggatttaaa agctttagtg 1020
137 aacgaggtag aaacaaacaa ccaagaattg ttgcaaacgc acactaaagt ctatcgccct 1080
138 tgggggagtt atgaagtctt gcatgagagc ggttgttaca aggttaagat tttagaagtc 1140
139 aaaccaaacg caaggctttc tttacaaaag catttccaca ggagcgaaca ctgggtagtg 1200
140 attagcggga tggcgagcgt ggagttggat caccagttgt ttgaattgca agctaatgag 1260
141 tccacttata tccctaaaaa caccctacac cgcctggcta attacggcaa gatcccttta 1320
142 attatcatag aagttcaagt gggcgagtat gtcggtgaag acgatattgt gcgcattgat 1380
143 gatgatttta acagacaaaa tcaaaacgcc                                  1410
146 <210> SEQ ID NO: 4
147 <211> LENGTH: 1488
148 <212> TYPE: DNA
149 <213> ORGANISM: Artificial Sequence
151 <220> FEATURE:
152 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
153       Primer
155 <400> SEQUENCE: 4
156 atggctgaat ggaaaacgga tacagaagaa gtcaaagagg ttgttaaaaa atgcagggaa 60
157 tttaaaagat ccttacaaga agaaaaatgc agtccattta tcaaagacct tgatagttac 120
158 gcgctaaaaa tcatagtgga gcgcagaaaa attgaacacc aattgcaaga agctatagaa 180
159 aaattaagaa gagccaaaaa aaagagaagt agcttttggg gatcctttgt agagggtgcg 240
160 agagatcttc ttgatatggt cagggagatt atcccacctg ctaaattggg tgctgaagct 300
161 tgtgataagg ttttaaatct tatggaagac aatatagaaa aatgggaaca caatgtaagg 360
162 ttattagaac gaatgcttga aatctacgcc actcaagcca aagcgagcgc ggaacttgta 420
163 gagggagctt ggaagagcgt taaaaagtcg ttggactttt ataccgataa gcaccaggaa 480
164 tttatcaaac gcttgaacta tgcgagtgaa gcgatagaca acgaatacaa tatcgcgccc 540
165 ccagaaattt tgaacgagag cgattttgaa agccctacga ttgttttataa ccctaaaaaa 600
166 agcgtttatg atgaacactt gaaagatttg agggaagatt ttagcttttc tttatacgct 660
```

RAW SEQUENCE LISTING   DATE: 11/03/2005
PATENT APPLICATION: US/10/553,928   TIME: 08:27:22

Input Set : D:\SONN079US.APP.txt
Output Set: N:\CRF4\11032005\J553928.raw

```
167 gatttgaaaa acagaattaa cgcttcttct aagctagatc gcaccacaac ctctaaagag 720
168 caagaatttg aaaagaattt agaggatttg atgccaggct ttagaggtgg aactgacact 780
169 ttgtctggcg atgaattaga gcacatggca agctttagag ggcaagaatt tgaaaagaat 840
170 ttagaggatt tgatgccgag ttctttaggc gtgcattctt atgatgagag cttgaattta 900
171 gccaaaaaga attgcgttaa aaattgtaag aaagctttag gagattttac agaaaaaatc 960
172 aaagaatccc ccaacgattt gaacgctata aacgaagctt ttaatcattt ggaaacagag 1020
173 ttagaacgcg ctacagaaaa tttgagccaa aaaatagcgc ctattttaga gcggtatgaa 1080
174 aatgataagc ggcaaaaatt gggttatggc gagttttag aaaaagaaaa agagggcttt 1140
175 atggtagatg agcaaaaccc ttatccggaa gaagtccgct ttaatgagtt gcgtttagcg 1200
176 gaatttgaga gcgttttag cgccattgtg cctttagagg atttagataa acctgcatgc 1260
177 gctcatcatg ccctaaaggc tttagaagcc acgcttaaaa atagggattt gggctttgat 1320
178 gcgacagaat tggaacagat cgcaaaaggt ttcattccta aggggtattt gtggcatttt 1380
179 gacgcgaatg tttagggaa tgtggcgttg gtgagagaag agttattatt aggcgtgaaa 1440
180 cacacgaaag gatacttact atggaaacaa ttcctgcaaa ctcagaac            1488
183 <210> SEQ ID NO: 5
184 <211> LENGTH: 795
185 <212> TYPE: DNA
186 <213> ORGANISM: Artificial Sequence
188 <220> FEATURE:
189 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
190       Primer
192 <400> SEQUENCE: 5
193 atgaacactt acgctcaaga atccaagctc aggttaaaaa ccaaaatagg ggctgatggg 60
194 cggtgcgtga ttgaagacaa tttttcacg cccccctta agctcatggc gcccttttac 120
195 cctaaagacg atttagcgga aatcatgctt ttagcggtaa gccctggcat gatgaggggc 180
196 gatgcgcaag atgtgcaatt aaacatcggt ccaaattgca agttaaggat cacttcgcaa 240
197 tcctttgaaa aaatccataa cactgaagat gggtttgcca gcagagacat gcatattgtt 300
198 gtgggggaaa acgctttttt agattttgcg ccttttcccgt taatcccctt tgaaaacgcg 360
199 cattttaagg gcaacaccac gatttctttg cgctctagct ctcaattgct ctatagtgaa 420
200 atcattgtcg cagggcgagt ggcgcgcaat gagttgttta aattcaaccg cttgcacacc 480
201 aaaatctcta ttttacaaga tgagaaaccc atctattatg acaacacgat tttagatccc 540
202 aaaaccaccg acttaaataa catgtgcatg tttgatggct atacgcatta tttgaatttg 600
203 gtgcttgtca attgccccat agagctctct ggtgtgcgag aatgcattga agaaagcgaa 660
204 ggggtggatg gggcagtgag tgaaaccgct agttctcatt tatgcgtgaa agctttagcg 720
205 aaaggctcag aacccttatt gcatttaaga gaaaaaatcg ctcgcttggt tacgcaaacc 780
206 accacgcaaa aggtt                                               795
209 <210> SEQ ID NO: 6
210 <211> LENGTH: 1707
211 <212> TYPE: DNA
212 <213> ORGANISM: Artificial Sequence
214 <220> FEATURE:
215 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
216       Primer
218 <400> SEQUENCE: 6
219 atgaaaaaga ttagcagaaa agaatatgtt tctatgtatg ccctactac aggcgataaa 60
220 gtgagattgg gcgatacaga cttgatcgct gaagtagaac atgactacac catttatggc 120
221 gaagagctta aattcggtgg cggtaaaacc ctgagagaag gcatgagcca atccaacaac 180
222 cctagcaaag aagaattgga tctaatcatc actaacgctt taatcgtgga ttcaccggt 240
223 atttataaag cggatattgg tattaaagat ggcaaaatcg ctggcattgg taaaggcggt 300
```

```
224 aacaaagaca tgcaagatgg cgttaaaaac aatcttagcg taggtcctgc tactgaagcc 360
225 ttagccggtg aaggtttgat cgtaactgct ggtggtattg acacacacat ccacttcatt 420
226 tcaccccaac aaatccctac agcttttgca agcggtgtaa caaccatgat tggtggcgga 480
227 actggtcctg ctgatggcac taatgcgact actatcactc caggcagaag aaatttaaaa 540
228 tggatgctca gagcggctga agaatattct atgaacttag gtttcttggc taaaggtaac 600
229 gcttctaacg acgcgagctt agccgatcaa attgaagctg gtgcgattgg ctttaaaatc 660
230 cacgaagact ggggcaccac tccttctgca atcaatcatg cgttagatgt tgcagacaaa 720
231 tacgatgtgc aagtcgctat ccacacagac actttgaatg aagccggttg cgtggaagac 780
232 actatggcag ctattgccgg acgcactatg cacactttcc acactgaagg tgctggcggc 840
233 ggacacgctc ctgatattat taaagtagct ggtgaacaca acattcttcc cgcttccact 900
234 aaccccacta tcccttttcac tgtgaataca gaagcagaac acatggacat gcttatggtg 960
235 tgccaccact tggataaaag cattaaagaa gatgttcagt tcgctgattc aaggatccgc 1020
236 cctcaaacca ttgcggctga agacactttg catgacatgg ggattttctc aatcaccagc 1080
237 tctgactctc aagctatggg tcgtgtgggt gaagttatca ctagaacttg gcaaacagct 1140
238 gacaaaaaca aaaaagaatt tggccgcttg aaagaagaaa aaggcgataa cgacaacttc 1200
239 aggatcaaac gctacttgtc taaatacacc attaacccag cgatcgctca tgggattagc 1260
240 gagtatgtag gttctgtaga agtgggcaaa gtggctgact tggtattgtg gagtcccgca 1320
241 ttctttggcg taaaacccaa catgatcatc aaaggcgggt tcattgcgtt gagtcaaatg 1380
242 ggtgacgcga acgcttctat ccctacccca caaccagttt attacagaga aatgttcgct 1440
243 catcatggta aagccaaata cgatgcaaac atcacttttg tgtctcaagc ggcttatgac 1500
244 aaaggcatta aagaagaatt agggcttgaa agacaagtgt gccggtaaa aaattgcaga 1560
245 aacatcacta aaaagacat gcaattcaac gacactaccg ctcacattga agtcaatcct 1620
246 gaaacttacc atgtgttcgt ggatggcaaa gaagtaactt ctaaaccagc caataaagtg 1680
247 agcttggcgc aactctttag cattttc                                    1707
250 <210> SEQ ID NO: 7
251 <211> LENGTH: 1707
252 <212> TYPE: DNA
253 <213> ORGANISM: Artificial Sequence
255 <220> FEATURE:
256 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
257      Primer
259 <400> SEQUENCE: 7
260 atgaaaaaga ttagcagaaa agaatatgtt tctatgtatg gccctactac aggcgataaa 60
261 gtgagattgg cgatacaga cttgatcgct gaagtagaac atgactacac catttatggc 120
262 gaagagctta aattcggtgg cggtaaaacc ctgagagaag gcatgagcca atccaacaac 180
263 cctagcaaag aagaattgga tctaatcatc actaacgctt taatcgtgga ttacaccggt 240
264 atttataaag cggatattgg tattaaagat ggcaaaatcg ctggcattgg taaaggcggt 300
265 aacaaagaca tgcaagatgg cgttaaaaac aatcttagcg taggtcctgc tactgaagcc 360
266 ttagccggtg aaggtttgat cgtaactgct ggtggtattg acacacacat ccacttcatt 420
267 tcaccccaac aaatccctac agcttttgca agcggtgtaa caaccatgat tggtggcgga 480
268 actggtcctg ctgatggcac taatgcgact actatcactc caggcagaag aaatttaaaa 540
269 tggatgctca gagcggctga agaatattct atgaacttag gtttcttggc taaaggtaac 600
270 gcttctaacg acgcgagctt agccgatcaa attgaagctg gtgcgattgg ctttaaaatc 660
271 cacgaagact ggggcaccac tccttctgca atcaatcatg cgttagatgt tgcagacaaa 720
272 tacgatgtgc aagtcgctat ccacacagac actttgaatg aagccggttg cgtggaagac 780
273 actatggcag ctattgccgg acgcactatg cacactttcc acactgaagg tgctggcggc 840
274 ggacacgctc ctgatattat taaagtagct ggtgaacaca acattcttcc cgcttccact 900
275 aaccccacta tcccttttcac tgtgaataca gaagcagaac acatggacat gcttatggtg 960
276 tgccaccact tggataaaag cattaaagaa gatgttcagt tcgctgattc aaggatccgc 1020
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 11/03/2005
PATENT APPLICATION: US/10/553,928   TIME: 08:27:23

Input Set : D:\SONN079US.APP.txt
Output Set: N:\CRF4\11032005\J553928.raw

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:50; N Pos. 735
Seq#:226; Xaa Pos. 907
Seq#:228; Xaa Pos. 245

· · · ·

VERIFICATION SUMMARY   DATE: 11/03/2005
PATENT APPLICATION: **US/10/553,928**   TIME: 08:27:23

Input Set : **D:\SONN079US.APP.txt**
Output Set: **N:\CRF4\11032005\J553928.raw**

L:12 M:270 C: Current Application Number differs, Replaced Current Application Number
L:1979 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50 after pos.:720
L:11016 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:226 after pos.:896
L:11355 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:228 after pos.:240